

DOCUMENT OF THE INTER-AMERICAN DEVELOPMENT BANK

## **COSTA RICA**

### **PROGRAM TO DEVELOP SUSTAINABLE AGRICULTURAL PRODUCTION**

**(CR-0142)**

### **LOAN PROPOSAL**

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## BASIC SOCIOECONOMIC DATA

For basic socioeconomic data on Costa Rica, including public debt information, please refer to the following address:

**English:**

<http://www.iadb.org/RES/index.cfm?fuseaction=externallinks.countrydata>

**Spanish:**

<http://www.iadb.org/RES/index.cfm?fuseaction=externallinks.countrydata>

## ABBREVIATIONS

AEA	Specialized Administrative Agency
ASA	Agricultural Services Agencies
CND	National Governing Council
CNP	National Production Council
CRM	Joint Regional Committee
DNEA	National Agricultural Extension Directorate
FAO	United Nations Food and Agriculture Organization
FID	Comprehensive Instructional Farms
FTAA	Free Trade Area of the Americas
ICDF	International Cooperation and Development Fund (Taiwan)
IDA	Agricultural Development Institute
INCOPECA	Costa Rican Fisheries and Aquaculture Institute
INEC	National Institute of Statistics and Census of Costa Rica
InfoAgro	Agricultural Information System
INFOCOOP	Cooperative Development Institute
MAG	Ministry of Agriculture
MIDEPLAN	Ministry of National Planning and Economic Policy
PIMA	Comprehensive Agricultural Marketing Program
PNDH	National Human Development Program
SENARA	National Irrigation and Drainage Service
SEPSA	Executive Secretariat for Agriculture Sector Planning
SETENA	Technical Secretariat for the Environment
SIDES	Sustainable Development Indicators System
UCP	Program Coordination Unit
WTO	World Trade Organization



## COSTA RICA

### IDB LOANS

APPROVED AS OF SEPTEMBER 30, 2002

	US\$Thousand	Percent
<b>TOTAL APPROVED</b>	<b>2,154,595</b>	
DISBURSED	1,770,420	82.2%
UNDISBURSED BALANCE	384,175	17.8%
CANCELLATIONS	219,125	10.2%
PRINCIPAL COLLECTED	962,310	44.7%
<b>APPROVED BY FUND</b>		
ORDINARY CAPITAL	1,663,586	77.2%
FUND FOR SPECIAL OPERATIONS	351,828	16.3%
OTHER FUNDS	139,182	6.5%
<b>OUTSTANDING DEBT BALANCE</b>	<b>808,110</b>	
ORDINARY CAPITAL	691,048	85.5%
FUND FOR SPECIAL OPERATIONS	116,079	14.4%
OTHER FUNDS	983	0.1%
<b>APPROVED BY SECTOR</b>		
AGRICULTURE AND FISHERY	265,229	12.3%
INDUSTRY, TOURISM, SCIENCE TECHNOLOGY	109,773	5.1%
ENERGY	978,691	45.4%
TRANSPORTATION AND COMMUNICATIONS	109,123	5.1%
EDUCATION	107,806	5.0%
HEALTH AND SANITATION	158,788	7.4%
ENVIRONMENT	0	0.0%
URBAN DEVELOPMENT	27,966	1.3%
SOCIAL INVESTMENT AND MICROENTERPRISE	4,391	0.2%
REFORM PUBLIC SECTOR MODERNIZATION	283,010	13.1%
EXPORT FINANCING	98,100	4.6%
PREINVESTMENT AND OTHER	11,718	0.5%

\* Net of cancellations with monetary adjustments and export financing loan collecti



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## Costa Rica

### Tentative Lending Program

#### 2002

Project Number	Project Name	IDB US\$ Millions	Status
CR0142	Sustainable Development of the Food and Agriculture sector	17.5	
Total - A : 1 Projects		17.5	
TOTAL 2002 : 1 Projects		17.5	

#### 2003

Project Number	Project Name	IDB US\$ Millions	Status
CR0144	Health Sector Development	10.0	
CR0140	Sector Program for Competitiveness Reforms	100.0	
*CR0143	San Jose-Caldera Toll Road	64.2	
Total - A : 3 Projects		174.2	
CR0148	Rural Roads Program	50.0	
CR0153	Science and Technology Program	50.0	
CR0154	National Congress Modernization	20.0	
CR0155	Modernization of Management of the Ministry of Finance	25.0	
CR0147	Education and Competitiveness	30.0	
Total - B : 5 Projects		175.0	
TOTAL - 2003 : 8 Projects		349.2	
Total Private Sector 2002 - 2003		64.2	
Total Regular Program 2002 - 2003		302.5	

\* Private Sector Project



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## **COSTA RICA**

### **STATUS OF LOANS IN EXECUTION AS OF SEPTEMBER 30, 2002**

(Amounts in US\$ thousands)

<b>APPROVAL PERIOD</b>	<b>NUMBER OF PROJECTS</b>	<b>AMOUNT APPROVED</b>	<b>AMOUNT DISBURSED</b>	<b>% DISBURSED</b>
<b>Before 1996</b>	<b>7</b>	<b>425,729</b>	<b>198,598</b>	<b>46.65%</b>
<b>1996 - 1997</b>	<b>2</b>	<b>40,650</b>	<b>13,558</b>	<b>33.35%</b>
<b>2000 - 2001</b>	<b>4</b>	<b>128,565</b>	<b>0</b>	<b>0.00%</b>
<b>TOTAL</b>	<b>13</b>	<b>\$594,944</b>	<b>\$212,155</b>	<b>35.66%</b>

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\* Net of Cancellations . Excluding export financing loans.





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Departamento de Desarrollo Sostenible  
División de Información de Tecnología para el Desarrollo  
Sistema de Información Geográfica (SDS/gis) 27/9/02

**PROGRAM TO DEVELOP SUSTAINABLE AGRICULTURAL PRODUCTION**  
**(CR-0142)**

**EXECUTIVE SUMMARY**

<b>Borrower:</b>	Republic of Costa Rica	
<b>Executing agency:</b>	Ministry of Agriculture (MAG)	
<b>Amount and source:</b>	IDB (OC):	US\$14,400,000
	Local:	<u>US\$ 3,200,000</u>
	Total:	US\$17,600,000
<b>Terms and conditions:</b>	Amortization period:	20 years
	Grace period:	4 years
	Disbursement period:	minimum 3 years; maximum 4 years
	Interest rate:	variable
	Inspection and supervision:	1.00 percent
	Credit fee:	0.75 percent
	Currency:	U.S. dollars under the Single Currency Facility from the Ordinary Capital
<b>Objectives:</b>	The general objective of the program is to increase the income and improve the quality of life of the households of small and medium-scale agricultural producers, through enhanced competitiveness of agricultural production systems on an economically and environmentally sustainable basis.	
	The specific objectives of the program are to: (i) increase the competitiveness of small and medium-scale agricultural producers by means of technologies and products that generate sustainable economic opportunities by improving productivity and providing greater access to market opportunities; and (ii) improve environmental management by small and medium-scale agricultural producers by providing technical assistance and recognizing external environmental benefits.	
<b>Description:</b>	To achieve its objectives, the program has been structured in the following components:	

**Component 1: investment and technical assistance in sustainable agricultural production (US\$8.8 million).** This component is designed to address simultaneously the interrelated problems of competitiveness and sustainable management of natural resources that affect small and medium-scale producers in Costa Rica. To do so, it will use technical assistance as a vehicle to achieve technological change and facilitate the development of the market for services rendered by private providers. This component will contribute to local projects through technical assistance (US\$2.5 million) and partial payment of investments at the level of farms and small agribusinesses, based on their environmental benefits (US\$6.3 million). The projects will be submitted by organizations of small and medium-scale agricultural producers. The beneficiaries will contribute 50 percent of the technical assistance, with the exception of organizations of indigenous producers, which will contribute 10 percent. The government will recognize the above-mentioned environmental benefits of local projects by subsidizing 20 percent to 30 percent of the investment that would be financed by the program.

**Component 2: training and information (US\$2.35 million).** This component has three objectives: (i) to strengthen the capacity of producers' organizations, women's organizations, and rural youth, so that these groups can operate a business activity and gradually wean themselves from technical assistance from the government; (ii) to train the MAG extension agents and the service providers so that they can meet the new demands of the organizations for competitiveness in nontraditional areas; and (iii) to adapt the InfoAgro information system by interconnecting the central system with all the networks of the Agricultural Services Agencies (ASAs) that report to the MAG, so as to offer producers the information needed for their individual operations. The component is divided into two subcomponents: (i) training; and (ii) information.

**Component 3: studies to support competitiveness in the agricultural sector (US\$1.6 million).** The objective of this component is to provide the MAG with the instruments needed to develop its sector policy in response to the new challenges of competitiveness, and to promote the development of agricultural activities in the framework of environmental sustainability. The following studies will be carried out: (i) studies on baseline data and information on the agricultural sector; (ii) studies on sector competitiveness; (iii) studies on the system for monitoring and evaluation of the program's environmental and social impact and the socioeconomic impact on the sector; (iv) market studies on providing financial incentives for environmental benefits in the agricultural sector; (v) a participatory study on the potential for agricultural development and payment for environmental services in indigenous

communities; and (vi) studies for specific projects in agricultural production, marketing, and agribusiness.

**The Bank's  
country and  
sector strategy:**

This operation is consistent with the Bank's strategy with the country in that it will contribute to sustainable economic growth through actions to promote the competitiveness of the agricultural sector while at the same time reducing rural poverty. The proposed activities are linked to and consistent with: (i) the mandate of the Eighth General Increase in Resources to modernize and strengthen agricultural services (August 1994); (ii) the Operations Policy on Rural Development ([operations policy] OP-752), December 1994); (iii) the Bank strategy for agrifood development; and (iv) the 2000-2002 Country Paper (GN-1982-3), which focuses mainly on supporting achievement of the objectives set forth in the National Human Development Program (PNDH) of the Government of Costa Rica.

**Environmental  
and social  
review:**

The program will have a positive environmental and social impact. Financing will be extended for the introduction of agricultural and agroforestry systems that minimize the use of agrochemicals and of diversified production systems. The program will support the use of productive processes in keeping with intended land use, taking into account plans for municipal land use and watershed management. Conservation agriculture and organic farming techniques will be included in the training and technical assistance activities to ensure that they are considered in project design, preparation, execution, and monitoring. The target population of the program is low-income groups concentrated in the poorest regions of the country. The eligibility criteria for organizations and projects, as well as for technical assistance and training services, have been designed taking into account the specific needs of rural women, young producers and minority ethnic groups. In areas with indigenous and Afro-Costa Rican populations, special attention has been accorded these groups in program design and execution. By motivating producers to submit projects, the program will contribute to the consolidation of participatory processes, which entail greater social equity and transparency in the allocation of resources. An environmental assessment was performed and an environmental and social management proposal designed, including an impact monitoring and measurement system. In addition to financing activities of direct benefit to the environment, the program also includes: (i) operating regulations stipulating the procedures for environmental and social review and supervision at each stage of the project cycle so as to ensure that every project approved is socially and environmentally feasible and complies with Costa Rican legislation and regulations; and (ii) the program impact monitoring and measurement system, which, in addition to regular monitoring and evaluation activities, will also monitor social and environmental impact. Effective

implementation of these procedures, together with the monitoring and follow-up on the social and environmental factors of approved projects, will be the purview of a social and environmental specialist in the UCP, who will be supported by ASA experts specially trained to this end. To ensure the proper implementation of the procedures, evaluate their effectiveness, and verify the environmental and social sustainability of investments, the executing agency will arrange for at least two independent environmental audits, one mid-term and the other upon program completion.

**Benefits:**

The program will have a positive socioeconomic, environmental, and social impact. The socioeconomic benefits will be: (i) an increase in income for small and medium-scale producers and the competitiveness of agricultural operations through the development of economically and financially profitable activities that are also environmentally and socially sustainable; (ii) enhanced competitiveness for farmers through the adoption of innovative, sustainable technologies and production systems that will improve their crop yields, in combination with conservation techniques; and (iii) the public benefits for the population in the regions covered by the operation and the country as a whole, of avoiding the social costs and health effects of soil and water contamination, and the social costs of rural-to-urban migration.

The social benefits of the program are linked to the fact that the program beneficiaries will generally be low-income groups, with priority being assigned to the poorest regions in the country. To ensure that these benefits reach rural women, youth, and minority ethnic groups, eligibility criteria have been developed for organizations and projects, and the technical assistance and training services pay special attention to the specific needs of these groups. The program will also contribute to consolidating the processes of open discussion, which enhances social equity and transparency in the allocation and expenditure of resources. The training under the program will directly benefit the poor rural population and increase the human and social capital of rural communities.

**Risks:**

A significant drop in the market prices of certain agricultural products could erode the expected return on the crops expanded using program support. To minimize this risk, the projects financed by the program will include an analysis of national and foreign markets, together with technical assistance and forecasts for product processing and marketing. In addition, flexibility in the content of the projects to be financed will make it possible to adjust the crops and products to changing market conditions. Finally, the updated information on prices and market conditions that will be made available to producers through InfoAgro and the technical assistance service providers will

further contribute to reducing this risk. Another risk is that the producers may not show sufficient interest in environmentally sustainable technologies. This risk has been mitigated by the selection criteria for the projects to be financed, the financial recognition of environmental benefits, and the technical assistance with a conservation agriculture approach. Despite the producer interest in adopting the new practices, there is the risk that some of them may lack the financial resources they will be required to contribute, given the scant incomes of small producers. To mitigate this risk, the program calls for the participation of Banco Nacional de Costa Rica, which has agreed to make a line of credit available for granting medium-term loans to project beneficiaries.

**Special  
contractual  
clauses:**

**Conditions precedent to the first disbursement:**

1. Evidence must be submitted that: (i) the Program Coordination Unit (UCP) has been created and its minimum staffing selected (paragraphs 3.13 and 3.17); (ii) the National Governing Council (CND) has been created and staffed (paragraph 3.12).
2. Evidence must be submitted that the operating regulations of the program, duly approved by the CND, have entered into force, in terms deemed acceptable to the Bank (paragraph 3.12).

**Conditions precedent to the disbursement of financing for component 1:**

1. Evidence must be submitted that the borrower and Banco Nacional de Costa Rica have signed an interinstitutional agreement that, among other things, ratifies Banco Nacional's decision to open a line of credit for participating producers who wish to avail themselves of it (paragraph 3.21).
2. Evidence must be submitted that the eight Joint Regional Committees (CRMs) have been created and staffed (paragraph 3.21).

**Conditions precedent to the disbursement of financing for components 2 and 3:**

Evidence must be submitted that the Specialized Administrative Agency responsible for the procurement of goods and services, hiring of consulting services, and disbursements for components 2 and 3 has been selected and hired, in terms acceptable to the Bank (paragraph 3.13).

Even before the conditions precedent have been met, the Bank may disburse up to US\$250,000 to initiate activities under the program, provided all the General Conditions set forth in the loan contract have been met.

**Poverty-targeting and social sector classification:**

This operation qualifies as a social equity-enhancing project, as described in the key objectives for Bank activity contained in the Report on the Eighth General Increase in Resources (document AB-1704). This operation also classifies as a poverty-targeted investment project based on geographical targeting (paragraphs 2.6 and 4.21-4.23).

**Exceptions to Bank policy:**

None.

**Procurement:**

The procurement of goods and related services and the selection and hiring of consulting services will be carried out in accordance with Bank procurement procedures and policy. International competitive bidding will be required for the procurement of goods and related services with a cost equal to or greater than US\$250,000 equivalent. International competitive bidding will be required for consulting services with a cost equal to or greater than US\$200,000 equivalent. The procurement of goods and related services and the hiring of consulting services for amounts below those thresholds will be governed by the applicable Costa Rican legislation, provided that it does not conflict with the respective principles and policies of the Bank. For the private technical assistance services (part of component 1), the beneficiary organizations that have had a project previously approved will be free to select from among the suppliers of such services that have been authorized nationally and included in the roster of providers to be established by the MAG. Annex II sets forth the tentative procurement plan for the various program components.

## **I. FRAME OF REFERENCE**

### **A. The agricultural sector in Costa Rica**

- 1.1 The agricultural sector is of significant importance to the economy of Costa Rica, in that it accounts for 31.7 percent of exports, 20.4 percent of employment, and 10.7 percent of gross domestic product (GDP). When all the activities in the agri-food and agroindustrial sector are also taken into account, the sector's contribution to GDP is estimated at about 17 percent.
- 1.2 The recent performance of the agricultural sector is unsatisfactory, because despite the fact that the sector has sufficient potential to be the motor for economic expansion, its average growth has been scarcely 2.7 percent per year from 1995 to 2001, a period in which Costa Rica's GDP increased at a pace of 4.3 percent annually. The insufficient expansion of agricultural output is conditioned for the most part by three factors: (i) the small change in agricultural productivity levels, largely owing to insufficient access to information services, adequate technologies, and production support services; (ii) the application of environmentally unsustainable productive practices, which is reflected in low productivity levels on the land where such practices are pursued; and (iii) the absence of a legally adequate cadastre and property registry covering the entire territory, which has an impact on production by increasing transaction costs in the market for land. The crisis in Costa Rica's agricultural sector has been exacerbated in recent years by the drop in world market prices for the main traditional export products, namely coffee, bananas, and sugar. The contribution of these products to exports has decreased from 32.4 percent in 1995 to 14.5 percent in 2000.
- 1.3 The slow growth of the agricultural sector has a negative impact mostly in rural areas, where the majority of the poor reside. In 1999, the incidence of poverty in rural areas was 26.3 percent, as compared to 20.6 percent in urban areas. Extreme poverty is even more heavily concentrated in rural areas, with an incidence of 9.6 percent compared to only 4.9 percent in urban areas. The situation is particularly critical for the 80 percent of small and medium-scale agricultural producers working the land using processes that result in accelerated water erosion, loss of fertility, and soil degradation, for whom there is a vicious circle of low productivity and overexploitation of the soil. These problems are more pronounced in Chorotega, Brunca and Huetar Norte, which are among the poorest regions of the country.
- 1.4 Despite the substantial reductions in import tariffs since 1995, there are still high levels of protection for various agricultural products. In the cases of rice, sugar, onions, pork, beans, milk, and potatoes, tariffs range from 35 percent to 72 percent; for chicken parts the tariff is even higher, at 154 percent. These levels of protection will disappear in the medium term, in that Costa Rica has committed itself to a customs reduction process starting in 2005 within the framework of agreements in respect of the Free Trade Area of the Americas (FTAA) and the World Trade



Organization (WTO). Costa Rica has also signed other trade treaties with Chile, Canada, Mexico, and Trinidad and Tobago, which will increase the openness of the agricultural sector to external competition.

- 1.5 In response to the high production costs for traditional crops, and taking into account the challenges of external economic openness, producer organizations have recognized the need to adopt new productive technologies and to diversify their production, while introducing natural resource conservation practices in order to ensure sustainability. They realize that their economic survival depends on their capacity to increase their productivity levels in a sustainable manner, without damaging the environment and while simultaneously improving their access to markets for high-value food products.
- 1.6 The small and medium-scale agricultural producers are at a disadvantage vis-à-vis agribusiness producers in that they have problems gaining access to innovative, sustainable, and competitive technologies given the limitations on the coverage of public technical assistance services, their limited capital resources, and the risk aversion of their socioeconomic group in respect of technological change. These disadvantages are partially offset by the adoption of the sustainable development policy at the national level and by the availability of a small number of alternative technologies validated in the field by researchers and extension agents and adopted by a small but growing group of small and medium-scale producers.
- 1.7 Since 1999, the Government of Costa Rica has been promoting a Strategy for the Productive Restructuring of the Agricultural Sector. The emphasis of this Strategy is on promoting new low-cost technologies that are readily accessible to producers, and developing human capital through training services and technical assistance to producers. In this way, it is intended to make productive processes more competitive and increase rural incomes. The productive restructuring proposed involves the rational use of natural resources, based on the convergence of production interests and the principles of environmental sustainability.
- 1.8 The program examined here will contribute to the poverty reduction activities included in the National Human Development Program (PNDH) and set forth in the Economic Revitalization Plan 2002-2006, as part of one of the four Focus Areas aimed at “accelerating economic and social growth while protecting the environment,” especially as regards the enhancement of human capital.

## **B. Prevailing situation in the priority regions of the program**

- 1.9 **Brunca region:** The region has a total area of 9,528 km<sup>2</sup> and a population of 305,343. Some 62.5 percent of the people have some primary education; the birth rate is 26.06 per thousand and child mortality 14.41 per thousand, both of which are higher than national averages. The indigenous population of the region is 4,580

(1.5 percent of the total). The open unemployment rate is 7.1 percent, the agricultural work force 55 percent, and the poverty index 38.9 percent.

- 1.10 The production of small and medium-scale producers consists principally of coffee, corn, beans, root vegetables and tubers, green vegetables, citrus fruits, cattle and hogs. There are 3,774 small and medium-scale producers covered by extension services who work an area of 50,656 ha, which corresponds to 13.4 ha/farm. The environmental problems associated with agricultural production include soil degradation (erosion, compaction, and loss of fertility), downstream sedimentation, and river contamination with organic byproducts from agroindustrial processes.
- 1.11 **The Chorotega region** corresponds in its entirety to the Province of Guanacaste in the northern part of the country, covering an area of 1,015 km<sup>2</sup> divided politically into eleven cantons. Its population is 257,129, while the unemployment rate is 5.7 percent and the poverty index 36.2 percent. The economy is dependent on agriculture and tourism, sectors which employ 72 percent of the work force. The region features a seasonal phenomenon of fluctuating population, owing to migration associated with the harvest of agricultural products (sugar cane and melons).
- 1.12 There are 5,245 small and medium-scale producers covered by extension services who work an area of 46,706 ha, which corresponds to 8.9 ha/farm. The abandonment of agricultural activity has increased the reforestation and natural regeneration of areas no longer under cultivation.
- 1.13 **Huetar Norte region:** The region has an area of 9,800 km<sup>2</sup> and a population of 208,000. The open unemployment rate is 3 percent and the poverty index 32.6 percent. Some 46.7 percent of the labor force is engaged in agricultural activities, while ecotourism is prominent in the services sector.
- 1.14 There are 3,361 small and medium-scale producers covered by extension services who work an area of 26,677 ha, which corresponds to 7.9 ha/farm. A substantial proportion of these producers are grouped in various types of organizations such as chambers, associations, cooperatives, and syndicated groups.

### **C. Government strategy**

- 1.15 In response to the decline in the competitiveness of traditional agricultural products and the shrinkage of the agricultural frontier, efforts to improve the incomes of rural producers must focus on increasing profitability per unit area. This presupposes a change in the production techniques used so as to reduce costs, as well as an effort to diversify production. The program examined here proposes to enhance the efficiency and quality of agricultural production by promoting new crops, greater value added, and increased productivity through a rational and sustainable use of water and soil as natural resources. It will also reduce the use of agricultural

chemicals and introduce different types of certification for products that would reach more profitable niche markets. At the same time, it is planned to ease the burden on the government budget by enhancing the role of the private sector as a provider of services and having producers contribute to paying for those services.

#### **D. The Bank's Strategy**

- 1.16 This operation is consistent with the Bank's Strategy of contributing to sustainable economic growth on the basis of actions that simultaneously promote the competitiveness of the agricultural sector and are focused on reducing rural poverty. The actions proposed are associated and consistent with: (i) the mandate of the Eighth Replenishment to modernize and strengthen agricultural services (August 1994); (ii) the rural development operational policy (OP-752, December 1994); (iii) the Bank's strategy for agri-food development; and (iv) the 2000-2002 Country Paper (document GN-1982-3), which is aimed principally at supporting the achievement of the objectives set forth in the National Human Development Plan (PNDH) of the Government of Costa Rica. The objective of this plan is to accelerate economic growth with positive social and environmental effects.

#### **E. Bank experience and actions of other donors**

- 1.17 The Bank has extensive experience in projects involving agri-food development and the sustainable development of natural resources, where the principal component has been technology transfer. In recent periods, there has been recognition of the efficacy of using competitive instruments, which benefit a broader group of entities and associations while increasing the participation of the private sector. The Bank's experience in such operations<sup>1</sup> has demonstrated the importance of promoting sustainable agricultural production practices to improve farmer incomes and ensure the conservation of soil and water resources. The institutional framework, training, and a participatory approach involving the beneficiaries have been decisive factors in the success of these operations.
- 1.18 The design of the operation examined here has built upon various experiences, such as watershed management projects,<sup>2</sup> which used extension systems to disseminate specific technologies with the rational use of natural resources (soil conservation, agroforestry, etc.). These experiences have demonstrated the importance of providing incentives for the use of sustainable production technologies that have an impact on household incomes through enhanced farm productivity, as well as favorable environmental impacts downstream. It has been learned that environmental benefits, which are mostly long-term and not directly perceived by

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<sup>1</sup> National Environmental Protection Program of El Salvador, PAES (886/OC-ES) and the Socioenvironmental and Forestry Development Program POSAF, Nicaragua (970/SF-NI and 1084/SF-NI).

<sup>2</sup> El Cajón Watershed Management Project, Honduras (718/OC-HO and 918/SF-HO) and the Soil Management and Conservation Project in the Chixoy Watershed, Guatemala (871/SF-GU).

the farmer, are not sufficient to achieve a high rate of participation by small farmer families if the benefits in question are not seen to be related to tangible short-term benefits. It has further been learned that it is important to impart a business approach to the production unit, considering all the resources available as well as land-use suitability in farm-level planning. The Bank has also gained comparable experience in projects supporting small and medium-scale producers in the context of rural economic development.<sup>3</sup> These programs have contributed to sustainable increases in sectoral agri-food competitiveness, increased rural incomes and employment, and created stimuli for small farmer family productivity.

- 1.19 An agricultural and soil conservation project executed by the Ministry of Agriculture and Livestock (MAG) in Costa Rica and financed by the United Nations Food and Agriculture Organization (FAO) in the 1990s demonstrated that producers' incomes can be raised substantially by means of activities like those proposed in this program. That project applied the participatory extension method, based on the active inclusion of farmers' associations from the planning of activities through to monitoring and appraisal, as is planned in the operation at hand.
- 1.20 Another successful project that provided financing for investments in Costa Rica's agricultural sector was financed by the International Cooperation and Development Fund (ICDF) during the period 1996-2000. This project offered credit to small and medium-scale agricultural producers at near market rates, together with a fund for technical assistance that was cofinanced with producers engaged in a wide range of agricultural activities. The line of credit in question was totally placed, and the producers repaid their debts with very little delay, demonstrating their responsibility as regards compliance with the lending bank. The proposed program draws on this experience in its operational design.
- 1.21 In Costa Rica, the Bank has financed a Program for Regularization of the Cadastre and Property Registry (1284/OC-CR), which entered the execution phase this year. This program would strengthen the operation examined here in that its aim is to promote the competitiveness of the agricultural sector by improving legal security and transparency in the market for land, thereby reducing transaction costs.

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<sup>3</sup> National Rural Development Program (927/SF-NI) and Food and Agricultural Revitalization Program (1001/SF-NI), Nicaragua, and the Coto Sur Agroindustrial Development Project (196/IC-CR) and Arenal-Tempisque Irrigation Project (208/IC-CR), Costa Rica.

## **II. THE PROGRAM**

### **A. Program conceptualization**

- 2.1 The program has been conceived as a pilot operation, in which economic and financial sustainability will be achieved by means of innovative technologies that combine increased incomes with conservation of the productive base and rewarding environmental benefits to reduce negative externalities. The training and investment processes will make it possible to raise the incomes of small and medium-scale producers in the shortest possible time and with the limited resources available, and, at the same time, reduce the negative environmental impacts of current practices, thereby improving the quality of life of the population. The use of modern management instruments will be disseminated with a view to improving the performance of producer-entrepreneurs in harmony with the conservation of natural resources. Management techniques will be put into practice that will help producers maintain their land parcels and products by taking a business approach, especially in the technological and management spheres; moreover, their access will be facilitated to an information network on prices, market opportunities, and efficient, competitive, and environmentally sustainable production technologies.

### **B. Objectives**

- 2.2 The general objective of the program is to increase the incomes and improve the quality of life of the households of small and medium-scale agricultural producers by enhancing the competitiveness of agricultural production systems on an economic and environmentally sustainable basis.
- 2.3 The specific objectives of the program are to: (i) increase the competitiveness of small and medium-scale agricultural producers by means of technologies and actions that generate sustainable economic opportunities by improving productivity and providing greater access to market opportunities; and (ii) improve the environmental management of small and medium-scale agricultural producers by providing technical assistance and rewarding external environmental benefits.
- 2.4 These objectives will be achieved via three components: component 1 for investment and technical assistance in sustainable agricultural production, component 2 for training and information, and component 3 for research in support of agricultural sector competitiveness.

### **C. Scaling**

- 2.5 Geographically, the program will cover the entire country, in which the subject population is the roughly 39,700 members of the 830 organizations of small and medium-scale agricultural producers, who with their families amount to a total of

about 200,000 persons. Owing to the fact that rural poverty in Costa Rica is more severe in the Chorotega, Brunca, and Huetar Norte regions, it is planned to devote the majority of the program's resources for technical assistance and investments in agricultural production (component 1) to these three regions. The potential target group in the regions for investments at the farm level is some 12,400 small and medium-scale producers working a total of 124,000 ha. The rest of the program (components 2 and 3) will cover the country's rural area as a whole, including the training of some 6,000 small and medium-scale producers.

- 2.6 The program will assign 75 percent of component 1 funds to the three Chorotega, Huetar Norte, and Brunca regions, where the concentration of poverty is the greatest, with the remaining 25 percent distributed throughout the rest of the country, with preference accorded to areas where the socioeconomic conditions and incidence of poverty are similar to those of the three priority regions. The program qualifies as a poverty-targeted investment (geographical criterion) because the rural population in these regions on average has levels of poverty incidence (38.9 percent) exceeding the average for the national population (21.3 percent), and because the rural population of the priority regions is poorer than the average for rural areas nationwide (24.3 percent), as indicated in the following table (see also 4.21 - 4.23).

**Table II-1**  
**Incidence of Rural Poverty in the Priority Regions**  
**Compared with National Level**

Area	Average rural poverty
Brunca region (rural)	43.2
Chorotega region (rural)	38.7
Huetar Norte region (rural)	34.9
Total rural, priority regions	38.9
National (rural)	24.3
National	21.3

## **D. Description of program**

### **1. Component 1. Investments and technical assistance in sustainable agricultural production (US\$8.8 million)**

- 2.7 Component 1 is designed to address simultaneously the interrelated problems of competitiveness and the sustainable management of natural resources which affect small and medium-scale producers in Costa Rica. To do so, it will make use of technical assistance as a vehicle for achieving technological change, based on the provision of agricultural extension services provided by the MAG as public services, and to facilitate the development of the market for services rendered by private providers.

- 2.8 This component will finance local technical assistance projects and investments submitted by organizations of small and medium-scale agricultural producers. Each project consists in a package of investments in technological changes on the members' farms and/or collectively beneficial agro-entrepreneurial investments, including technical assistance for their implementation. The number of farms participating in a project will vary between 15 and 30. The organizations' members would apply the new technology to one parcel on their farms for a period of 1-2 years. The producers will contribute 50 percent of the technical assistance cost, and, in addition, will be required to make the required investments with their own funds or using bank loans, separate from the environmental incentive they will receive from the government (see 2.11). For organizations of indigenous producers, the cofinancing of the technical assistance will be 10 percent.
- 2.9 The agro-entrepreneurial projects may include small preinvestment studies and technical assistance on technological changes necessary to take advantage of opportunities and address the demands of the world market.
- 2.10 The introduction of new technologies will be promoted in agricultural, livestock, agro-forestry, and forest grazing activities of high profitability and proven experience in the country. The activities and varieties to be introduced depend in large measure upon the identification and development of market opportunities for crops suited to the climatic conditions in each region, the nature of the soil, and the conditions of watersheds. All the forms of production will be combined with efficient measures for water and soil conservation.
- 2.11 To reward the environmental benefits stemming from the program, the government will offer an incentive of at least 20 percent of the investment costs (exclusive of labor) of each farmer for all approved projects. For projects requiring greater investment in works specifically intended for environmental protection (gully control, etc.), the cost of such works could be covered, provided that the total incentive payments do not exceed 30 percent of the investments in the farm. In this way, projects entailing higher levels of investment in environmental works will receive a larger share of the total investment costs for each project.
- 2.12 The program's contribution to the physical investments and technical assistance on each farm will range from US\$1,600 to US\$2,200, including the producer's counterpart for technical assistance, which would make it possible to serve an estimated 4,000 to 5,500 farms. In turn, this would mean a total of 160 to 220 projects to be implemented by the producers' organizations.
- 2.13 To facilitate the financing of the required investments, participating producers may avail themselves of a line of credit with the Banco Nacional de la República de Costa Rica, which will be established for this purpose and to complement this program. In this way, it will be possible to ensure the viable participation of low income producers, provided it is determined that the activities to be financed will be

profitable. The Banco Nacional is prepared to extend medium-term loans to the producers' associations and to individual producers to finance investment costs and technical assistance, applying the market interest rate and prevailing policies as to guarantees.<sup>4</sup> Although this bank line of credit would be financed by the capital equity of the Banco Nacional and is hence not included in the cost of the program, it is planned to include the Banco Nacional in the project review arrangements so as to facilitate approval of the loans that beneficiaries will be seeking from that bank (see 3.21).

- 2.14 The initial promotion and training planned under the program will enable the organizations to prepare project proposals, which will be prioritized by the MAG in light of their economic profitability, sustainability in all respects, and environmental and social impact. The environmental incentives will be disbursed principally during the first year of execution of each project, while the technical assistance will last 2 to 3 years, gradually decreasing as the producers gain familiarity with the new practices. The investments will cover costs such as improved seeds, wire, posts, tools, and any other necessary investment included in the project, in order to ensure that the anticipated impact is achieved. The technical assistance will include aspects relating to the sale and marketing of products. At the conclusion of each project, the beneficiary producers would be in a position to pay for additional technical assistance services they may require in the future.
- 2.15 During the program preparation process, reviews were conducted of particular technologies grouped into conservation agriculture (minimum tilling, contour plowing, infiltration ditches, improved seeds, turning stubble into the soil, etc.) and organic farming (comprehensive pest management, use of natural fertilizer, etc.), analyzing their benefits from the technical, financial, and environmental standpoints. A select sample of nine investment models was prepared, covering a wide range of options applicable in various productive systems and agroecological conditions. In all cases, the models analyzed are in conformity with technically validated productive systems which improve the management of natural resources. The producers' organizations will be able to propose other activities and technologies, provided they comply with the objectives of the program and the rules laid down for project submission.
- 2.16 The models considered in the analysis are consistent with the productivity and competitiveness problems facing small and medium-scale farmers in Costa Rica. The typology of productive projects or investments proposed for use in program execution are the outgrowth of this analysis and may be described as follows:

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<sup>4</sup> At present, 60 percent of Banco Nacional's total lending to agricultural producers is covered by fiduciary collateral and 40 percent by mortgage collateral. It is expected that this percentage will be similar for the producers benefiting from the Program. The interest currently being charged by Banco Nacional is 23.5 percent a year.



- 2.17 To be eligible for financing, projects must be intended to: (i) resolve productivity problems resulting from shortcomings in the technology applied in production systems; (ii) promote the adoption of new productive systems in response to changes in preferences on the local or international market; (iii) introduce productive systems that make more efficient use of the soil resource and therefore release surplus land that can be devoted to forestry or conservation purposes; (iv) reduce the use of agrochemicals and improve soil usage through the application of efficient natural resource management technologies; and (v) generate greater value added in primary production, through product grading and certification activities, and through quality and conformity with market preferences (see operating regulations).
- 2.18 The productive projects submitted by producers' organizations must provide substantially higher incomes than the systems they replace and be environmentally feasible, and the technology to be applied must be available and have been previously validated in field conditions in Costa Rica. The environmental impacts and improvements in the management of natural resources must be clearly positive and verifiable, and in conformity with the national strategies for sustainable development. There must be clearly identified marketing channels for the products, as well as markets capable of absorbing the anticipated production.
- 2.19 The program has been designed to be executed over a period of four years, which imposes some limitations on the provision of services and the development of the activities necessary for their results to be sustainable in the long term. For this reason, the models for the productive investments selected will be executed during the first three years, with the final year reserved for technical assistance work.

## **2. Component 2. Training and information (US\$2.35 million)**

- 2.20 This component has three objectives: (i) to build the capacity of producers' organizations, women's organizations, and rural youth, so that these groups may engage in entrepreneurial activity and gradually become independent of technical assistance from the government; (ii) to train the MAG's extension agents and the service providers so that they will be enabled to meet the new needs of the organizations in nontraditional areas, and do so competitively; and (iii) to adapt the InfoAgro information system by interconnecting the central system with all the networks of the Agricultural Services Agencies (ASAs—see 2.32), so as to offer producers the information needed for their individual operations. These objectives will be achieved through two subcomponents devoted to training and information.

### **a. Training subcomponent (US\$1.65 million)**

- 2.21 This subcomponent has three lines of action: training to producers' organizations on entrepreneurial and technical topics, training to the extension agents of the ASAs, and updating training for professionals that are potential service providers.

- 2.22 This subcomponent covers the entire country, but with emphasis on the Brunca, Chorotega, and Huetar Norte regions. The target population for the training is 6,000 producers, 75 extension agents leading the regional teams, 200 of the MAG's line extension agents, and 400 specialists from service providers.
- 2.23 Taking into account the experience of the National Extension System and strategies already tested, the subcomponent will involve workshops, seminars, meetings, field days, technical rounds for fact-finding, fora, analysis and performance assessment workshops, bulletins, radio and video programs, interviews and surveys, and demonstrations of methods and tests at Comprehensive Instructional Farms and on farmers' land parcels. The training on entrepreneurial topics will be aimed at members of organizations of small and medium-scale agricultural producers, which may or may not be participants in component 1. The producers receiving training will subsequently serve as trainers within their own organizations.
- 2.24 The training methodologies have been designed following the guidelines of the National Training Plan, which accords priority to specific activities aimed at disseminating among producers the techniques and methods needed for adapting their production to market conditions (problem analysis and resolution, negotiation, conflict management, etc.). This includes team leadership and the application of a rational decision-making model (cycle of diagnosis, planning, execution, and control), as well as information usage and feedback.
- 2.25 The training includes technical topics complementing the technologies promoted by the program. The training will cover issues such as organic farming as well as soil and water usage and conservation, considering plans for territorial and municipal ordinances, and for watershed usage where appropriate, as well as quality control, the organization of work in groups, and occupational health and safety. All the training activities will emphasize the integration of female and young producers, as well as minority ethnic groups, for which reason the training manuals to be prepared will be differentiated by audience, taking into account special aspects of the indigenous and Afro-Costa Rican populations, as well as gender considerations. It is estimated that a total of about 320 courses could be offered covering about 30 topics, benefiting approximately 6,000 producers at a total cost of US\$1 million. This amount includes the costs of the consulting work necessary for developing the models and topics of the courses to be offered. The producers' organizations will have to make a cash contribution equivalent to at least 10 percent of the cost of their members' participation in training courses.
- 2.26 The extension agents in leadership positions will be provided with technological updating on priority productive activities for each region. In addition, they will receive training in the techniques and methods used by public managers, as well as training in identifying a slate of key decisions to be made, developing their network of contacts, assimilating innovations, and using information technology tools.

- 2.27 The training for the line extension agents of the ASAs will include topics on new technologies and competitiveness on the one hand, and, on the other, topics that will enable them to assist the producers' organizations in problem solving. These topics include: an institutional orientation on services, so that they will know what programs are offered by the institutions in the sector and avail themselves of this knowledge to direct farmers to the best available source for addressing their needs; legal aspects; competitiveness and marketing at the national and international level; information management; and new, innovative productive technologies. The cost of this training is estimated at US\$300,000 for a total of 680 hours of short courses, seminars, and other events devoted to ASA extension agents, with preference accorded to those from the program's priority regions.
- 2.28 The program will also organize introductory courses for the personnel of technical assistance and training service providers, with a view to imparting to them the extension philosophy and methodology of the program. An estimated total of 330 hours of courses for a total of approximately 400 participants will be offered. The cost of this training is not included in the budget in that it will be financed by the course participation fees.
- 2.29 Given their role as theoretical/practical instruments for training and dissemination, it is planned to strengthen the Comprehensive Instructional Farms (FIDs) and to use them in each region to demonstrate the advantages of: alternative crops; conservation agriculture; integral production systems aimed at the efficient utilization of energy, through the processing and use of refuse; product processing; advances in interlinkages; and the application of technologies adapted to the environment. Dissemination efforts will also be conducted through support for meetings and other events of the beneficiaries' organizations themselves. Finally, it is planned to support the training and dissemination activities and equipment for rural youth, and young producers in particular, with a focus on agro-entrepreneurial approaches. The total amount of the afore-mentioned activities is approximately US\$350,000.
- 2.30 To guarantee the quality of services rendered to organizations through private providers, an accreditation system to be managed by the MAG will be introduced, and will register services providers. To obtain such accreditation, the firm, organization, or individual consultant will be required to document the entitlement to do business legally and provide references in respect of technical assistance projects carried out, as well as meet other criteria defined in the operating regulations. Execution at the local level will be supervised by the ASAs, which will provide feedback on the results to the accreditation system.

**b. Information subcomponent (US\$700,000)**

- 2.31 The aim of this subcomponent is to improve and upgrade the Agricultural Information System (InfoAgro). This system, established in 1998, was conceived as

a tool for agricultural development by providing an information technology platform accessible by the entire sector, be it public or private. While the initial expectations were met, it is evident that the technological platform for InfoAgro has limited capacity and, as a result, is currently experiencing problems with saturation and defective communications lines.

- 2.32 The Executive Secretariat for Agriculture Sector Planning (SEPSA) is responsible, by ministerial decree, for managing this system; nonetheless, at present it is being operated jointly with the National Production Council (CNP). By decision of the MAG, this system will be rehabilitated under the direct auspices of SEPSA Management and will interconnect all ASAs so that it will be possible to disseminate information at the farmer level. In this way, SEPSA would have the database required to perform adequate monitoring of the program as well as conduct studies on the sector, which is within its purview.
- 2.33 The investment in this component covers computers, modems, software, and the installation of a sufficient number of telephone lines to handle anticipated demand, as well as the support of a network information systems consultant for a period of 18 months. The system would also have an annual recurrent cost of US\$20,000 owing to the need for new telephone lines, which will be budgeted by SEPSA.

### **3. Component 3. Studies to support competitiveness of the agricultural sector (US\$1.6 million)**

- 2.34 The objective of the studies component is to provide the MAG with the instruments needed to develop its policy in response to the new challenges of competitiveness, and to provide incentives for the development of agricultural activities within a framework of environmental sustainability. The studies planned are:
- 2.35 Study of the information and baseline data on the agricultural sector, which will be used to recommend the database and indicators necessary to be able to conduct adequate monitoring of the development of the sector, which will be applied by SEPSA in its new database system. Moreover, it will provide farmers with the data necessary to enable them to reach decisions on the products and technologies to prioritize, based on market information. These studies have a total cost estimated at US\$400,000.
- 2.36 Competitiveness studies: There is concern in Costa Rica about the international commitments entered into in the area of tariff elimination and opening the economy, and accordingly it is deemed necessary to conduct an in-depth study of the legal instruments entailed in the treaties signed to date so as to define a commercial strategy. Financing will also be provided for a sectoral study on competitiveness and the rural economy, including the role of the municipalities and the private sector, with a view to identifying agricultural solutions for reducing poverty. The cost of these studies is estimated at US\$300,000.
- 2.37 Studies on the Monitoring and Evaluation System for the program's environmental and social impacts and the socioeconomic impacts on the sector, which would help the government follow up on the actions and projects under way. These studies are estimated to cost US\$250,000.
- 2.38 Market studies on economically rewarding the environmental benefits of the agricultural sector (US\$250,000). Costa Rica has adopted a national policy on sustainable economic development and environmental protection. In consequence, it is proposed to study the appropriateness of introducing a market instrument for paying for environmental services in the sector, through the introduction of sustainable and environmentally beneficial technologies. A participatory study will also be conducted on the potential for agricultural and forestry development, and payment for environmental services among others, in indigenous communities (US\$200,000). This study will place particular emphasis on identifying market niches for which the natural and cultural patrimony of the indigenous populations has a comparative advantage.
- 2.39 Specific project studies in areas of agricultural production, marketing, and agroindustry, which will endeavor to identify factors inhibiting the development of

the agricultural sector and assist in the identification of sustainable projects and programs in the rural environment. These studies are estimated to cost US\$200,000.

#### 4. Program administration, supervision, and auditing (US\$2.12 million)

- 2.40 The general administration and supervision costs of the program include: (i) the personnel costs of the UCP, as well as its operating costs, totaling US\$968,000 during the four years of execution; and (ii) activities necessary for initially operating and subsequently monitoring the program, such as promotion (US\$500,000), performance monitoring and appraisal (US\$205,000), audits (US\$150,000), as well as the costs of the Specialized Administrative Agency (AEA) (US\$300,000), which will be responsible for competitive bidding, contracting, procurement, contract administration, and disbursements for components 2 and 3.

#### E. Program cost

Table II-2  
Program Costs (in thousands of U.S. dollars)

Category	IDB	Local	Total	Percent
Components				
1. Technical assistance and investments	6,300	2,500	8,800	50
2. Training and information	2,070	280	2,350	13
3. Studies	1,600		1,600	9
Administration, supervision, and audits	1,800	300	2,100	12
<b>Subtotal</b>	<b>11,770</b>	<b>3,080</b>	<b>14,850</b>	<b>84</b>
Unallocated	819		819	5
Contingencies	635		635	
Escalation	184		184	
Financial costs	1,811	120	1,931	11
Interest	1,667		1,667	
Credit fee		120	120	
Inspection and supervision 1 percent	144		144	
<b>Total</b>	<b>14,400</b>	<b>3,200</b>	<b>17,600</b>	<b>100</b>
Percentage	82%	18%	100%	

#### F. Financing and local contribution

- 2.41 The estimated cost of the program is US\$17.6 million. The Government of Costa Rica will be responsible for the local counterpart in the amount of US\$3.2 million, an amount which may be deemed to include the US\$2.5 million that would be contributed by producers for the technical assistance under component 1 of the program. The interest on the loan would be financed by the program. The Bank loan would total US\$14.4 million from ordinary capital resources in a four-year execution period. Even before the prior conditions have been met, the Bank will be able to disburse up to US\$250,000 to initiate activities under the program, provided

that the conditions laid down in the General Regulations of the loan contract have been met.

**G. Financing source and conditions**

2.42 The loan terms are set forth below:

Amortization period:	20 years
Grace period:	4 years
Disbursement period:	minimum 3 years; maximum 4 years
Interest rate:	variable
Inspection and supervision:	1 percent
Credit fee:	0.75 percent per year on undisbursed balance
Currency:	U.S. dollars from the Single Currency Facility under the Ordinary Capital.

### **III. PROGRAM EXECUTION**

#### **A. Borrower, executing agency, and execution scheme**

##### **1. Borrower and executing agency**

- 3.1 The borrower for the operation is the Government of Costa Rica. The executing agency will be the MAG, through a UCP. The executing agency and execution scheme for the program are described below.

##### **2. Ministry of Agriculture**

###### **a. General organization**

- 3.2 The MAG is the policy direction agency for the national agricultural sector, and the Minister fills the role of leader and coordinator of the policies and services of the various agricultural sector entities: the National Production Council (CNP), Agricultural Development Institute (IDA), Costa Rican Fisheries and Aquaculture Institute (INCOPECA), National Irrigation and Drainage Service (SENARA), and the Comprehensive Agricultural Marketing Program (PIMA). The MAG has an Executive Secretariat for Agriculture Sector Planning (SEPSA) whose principal functions are to advise the Minister on competitiveness and sustainability issues, formulate the planning and strategies for the sector, and operate and maintain the agricultural information and data management system through the Agricultural Information System (InfoAgro). In addition, SEPSA is responsible for monitoring and following up on the projects and programs carried out by the MAG and assessing their impacts and results. The SEPSA Director reports directly to the Minister.
- 3.3 The primary objective of the MAG is to promote the development of national agriculture through the promotion of conditions conducive to the development of technologies that boost productivity, lower costs, and raise the level of competitiveness of producers. As a consequence, the MAG has been heading up the development of a new policy on rendering adequate public services to meet the requests of organizations of agricultural producers and enterprises.
- 3.4 Structurally, the MAG consists of the Minister, a Vice Minister, and a Senior Director. The latter supervises three functional areas: the Directorate of Plant Health, the Directorate of Animal Health, and the National Agricultural Extension Directorate (DNEA). At the regional level there are eight Regional Directorates and 89 Agricultural Services Agencies (ASAs). The functions of the DNEA include designing strategies and work targets for agricultural extension, while the regional directorates are tasked with applying the strategies and technologies and making them operational through the ASAs.



- 3.5 Of the MAG's total of 1,132 staff, 489 are employed in the extension services (43.2 percent), and of these only 12 work at the central level while the others are deployed in the regions. The MAG has a budget of approximately US\$25.5 million for 2002, and discounting the transfers to other entities associated with the MAG, Agricultural Extension services account for 35 percent of the net budget.
- 3.6 The MAG is managing a total of 15 projects costing a total of US\$33 million, of which some 25 percent is financed by external resources. These projects complement the proposed program and no duplication of efforts is involved.

**b. The DNEA and the agricultural extension system**

- 3.7 The DNEA has accumulated valuable experience in providing participatory extension services, defined on the basis of the delimitation of "productive projects" executed through organizations of small and medium-scale producers. Once a productive project is approved, its specific requirements are identified and structured activities involving training, technical assistance, and technology transfer to producers organized in groups are initiated. This methodology helps reduce the unit costs of the services provided and strengthens the exchange of experiences and information among producers.
- 3.8 At present, the MAG's extension agents perform multiple functions. In addition to providing direct technical assistance, they formulate, manage, and supervise projects, and promote development in their areas of influence. The limited number of extension agents and the multiplicity of their tasks makes it more and more difficult to achieve better results and have an impact, especially vis-à-vis the producers' organizations, which are becoming more demanding as regards access to new technologies and the need to approach the productive process in a comprehensive manner, including managerial capacities and the agro-entrepreneurial chain, from primary production through to agroindustry, marketing, and market research.
- 3.9 Over the past eight years, the MAG has reduced its staff devoted to extension services by 50 percent, and is continuing the process of reducing such staffing through attrition, and refraining from hiring new staff to replace personnel reaching retirement. Accordingly, the government strategy is for the DNEA to focus its efforts on regulating, coordinating, and supervising the support services provided to agricultural producers, the majority of which would be delivered by private technical assistance providers. In this way, an effort is made to enhance the efficiency with which such services are rendered in the medium and long term, and at the same time to alleviate the fiscal burden by reducing the amounts budgeted to finance them.

### **3. Execution scheme**

#### **a. Program execution structure**

- 3.10 Program execution will be under the direct responsibility of the MAG. Its structure and scheme will be consistent with established policy and the experience gained in similar programs, and accordingly will incorporate the principles of: (i) decentralization and decision-making at the regional level; (ii) participation of farmers' organizations; (iii) private sector participation for the provisions of goods and services; and (iv) an operating scheme based on the tested model for participatory extension services supported by operating regulations.
- 3.11 Program execution will rely upon a three-level organizational structure, a decision-making and policy level, an executive and administrative level, and an operational and execution level.
- 3.12 The decision-making level is represented by a National Governing Council (CND), which will be responsible for establishing the program's priorities, revising and adjusting annual plans, approving the operating regulations for the program and future changes endorsed by the Bank, reviewing the annual financial statements, reaching agreement on the execution structure, and resolving any major problem which might arise during execution. This Council would be made up of the MAG Minister, the Vice Minister, the SEPSA Director acting as its Technical Secretary, the DNEA Director, a representative of the Federations of Cantonal Agricultural Centers, a representative of the National Chamber of Agriculture and Agroindustry, a representative of the agricultural cooperatives to be designated by the Cooperative Development Institute (INFOCOOP), and a representative of the Coordinator of Work with rural women. One prior condition for the first disbursement will be the presentation of evidence that the CND has been created and staffed in a manner deemed acceptable by the Bank. A further prior condition for the first disbursement will be the presentation of evidence that the program's operating regulations, duly approved by the CND, have entered into force in terms deemed acceptable by the Bank.
- 3.13 The executive and administrative level would be represented by a UCP, which will report hierarchically to the Minister. The creation of the UCP and the selection of its minimum staffing referred to in paragraph 3.17 will constitute a prior condition for the first disbursement. The UCP would be supported by a Specialized Administrative Agency (AEA) contracted via competitive bidding, which would be tasked solely with executing components 2 and 3 of the program, the procurement of goods and services, the hiring of consultant services, and making the corresponding disbursements. One prior condition for the first disbursement of components 2 and 3 will be the presentation of evidence that the AEA has been selected (see Operational Execution) and that the draft contract between the MAG

and the AEA has been accepted by the Bank. This will permit administrative and financial flexibility and autonomy for execution of the program.

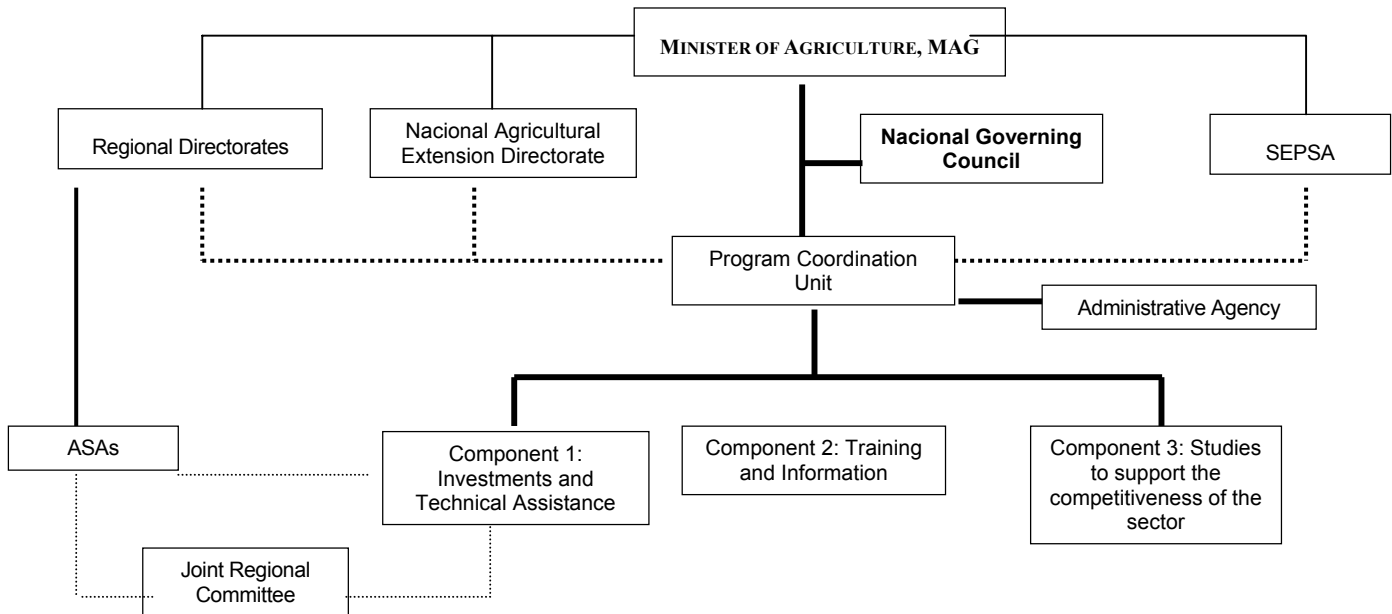
- 3.14 The function of the UCP is to provide coordination, administration, and execution for the program as a whole. In particular, the UCP will be responsible for: (i) preparing the annual operating plans; (ii) preparing disbursement requests with duly justified expenditures and submitting them to the Bank (iii) supervising the AEA in the procurement of goods and services and hiring of consultant services for components 2 and 3; (iv) maintaining the accounting records and preparing the consolidated financial statements for the program; (v) preparing the reports required by the program, including the report on the program's revolving fund; (vi) maintaining the consolidated records of the program as well as registers which show transferred resources in detail and the rendering of accounts for each entity participating in the program; (vii) preparing or revising the terms of reference of the various consultants, studies, and training events to be contracted by the AEA; (viii) reviewing the assessments of the projects approved by the Joint Regional Committee (CRM) (see below) presented by the regional ASAs (component 1); (ix) maintaining coordination with the DNEA and SEPSA on program execution; (x) maintaining and updating, with assistance from the ASAs, the records of all technical assistance service providers eligible to participate in component 1; (xi) with the assistance of the ASAs, conducting the campaign and selecting the media for effective dissemination to different audiences—the events, written materials, and information on the Internet and in other media will be focused on those audiences; and (xii) supervising the work of the ASAs at the regional level.
- 3.15 The principal requirements of the AEA are that it be accredited by the Office of the Controller General of the Republic to administer public funds, and that it have ample experience in administering programs in the agricultural sector. The AEA's responsibilities will be to: (i) prepare the terms of reference and documentation for competitive bidding on goods and services and for the hiring of consulting services; (ii) maintain special and separate banks account for the use of resources from the financing and the local counterpart; (iii) supervise the ongoing work of the various consultants and training activities being carried out; (iv) make all the payments for components 2 and 3 following prior approval by the UCP; (v) assist the UCP in all relevant areas within its purview; (vi) maintain specific and detailed accounting records on the use of resources from the financing and local counterpart; (vii) maintain the original documentation attesting to the expenditures eligible under the program; and (viii) make available to the program's external auditors all original documentation and information relating to the program, and provide any clarifications and explanations deemed necessary. These responsibilities will be reflected in the contract to be signed between the AEA and the MAG, which will form part of the operating regulations of the program.

- 3.16 All these functions, like those of the National Council and of the operational level described below, including the criteria, parameters, and processes for program execution, will be established in the operating regulations approved by the CND.
- 3.17 The structure of the UCP will include a program director and five specialists in: technical assistance and production; social and environmental analysis; training; following up on studies; and program monitoring and evaluation. It will also include an administrative assistant, an accountant, and administrative support personnel (secretary and messenger).
- 3.18 The director, the monitoring and evaluation specialist, and the administrative and support personnel will be financed by the Bank and recruited in accordance with Bank procedures. The MAG will finance the other four specialists using counterpart funding and will select them subject to prior nonobjection by the Bank.
- 3.19 The UCP will have a close link with the DNEA for program operation and project execution purposes, as well as with SEPSA which, in addition to serving as technical secretariat for the CND, would be responsible for execution of the InfoAgro subcomponent and, in accordance with its mandate as a unit of MAG, will be entrusted with evaluating the results and impacts obtained by the program and the agreed targets according to the Logical Framework. SEPSA will approve the terms of reference to be prepared by the UCP for hiring consultants to conduct the midterm and final evaluations of the program.
- 3.20 The operational and execution level will consist of: (i) the AEA, responsible for bidding, contracting, and disbursement for all contracts on the basis of terms of reference and other regulations prepared by the UCP; (ii) the ASAs, which would be supporting program execution through regional extension agents; and (iii) the technical assistance services providers, which will be hired directly by the farmers' organizations and registered with the DNEA of the MAG and the UCP, after prior verification of their skills.
- 3.21 Finally, eight Joint Regional Committees (CRMs) will be created, one per region. They will consist of the Regional Director and the Regional Chief of Extension Services of the MAG and a representative of the beneficiary organizations in the region, and will review and approve the projects submitted by organizations through the ASAs. In order to handle projects for which the organizations' members wish to use a line of credit from Banco Nacional, the CRMs will include two specialists from that bank. This mechanism is innovative in the sense that it combines the processes of project appraisal by the MAG and by the rural boards of Banco Nacional into a single process. In this committee, the projects previously examined for their technical, financial, and environmental viability and revised by the ASAs will be presented for final appraisal and approval. The participation of Banco Nacional is justified for the following reasons: (i) its readiness to allocate funds to finance investments; (ii) its coverage in the regions where the program

operates; (iii) its experience working with small farmers; (iv) its experience working with the MAG; and (v) its capacity to approve projects at its regional offices without needing to seek a second approval by the bank's head office. The creation and configuration of CRMs in terms deemed acceptable by the Bank will be a prior condition for the first disbursement under component 1. An additional prior condition for this component will be the presentation of evidence that the borrower and the Banco Nacional de Costa Rica have signed an interinstitutional agreement deemed acceptable by the Bank and which, among other things, ratifies Banco Nacional's decision to open a line of credit for producers wishing to access same and who meet the program requirements.

- 3.22 The loan funds will be deposited in two bank accounts, the first in the name of the program, to be managed by the UCP to finance component 1, and the second in the name of the AEA, to cover the operating costs of components 2 and 3. In addition, the UCP will open two separate bank accounts into which the technical assistance funds and environmental incentives funds will be transferred from the main account. They will be managed by the UCP to disburse to organizations the relevant amounts for each project approved.

**Figure 1: Program Execution Structure**



**b. Operational execution**

3.23 One of the primary activities of the UCP will be the campaign to promote the program and increase the awareness of the target group, including seminars and advertising aimed at disseminating among the associations the possibility of submitting projects, and publicizing the criteria, procedures, and rules of the operating regulations. At the same time, it will work to establish a roster of specialized entities and individual professional consultants that are authorized to provide the required technical assistance services. The UCP and the ASAs will ensure the participation of women, youth, and minority ethnic group producers in the formulation of projects, and their participation in general in the first two components.

**(i) Mechanism for execution of component 1**

3.24 Component 1 has three aspects: (i) technical assistance offered by private sector providers; (ii) investments in productive materials and inputs; and (iii) rewarding environmental benefits. The technical assistance and environmental benefits will be subsidized by the government on the basis of criteria established in the operating regulations and presented in Chapter II, while the agricultural investments will be financed by the agricultural producers using their own funds or making use of the line of credit from Banco Nacional or other financing sources.

3.25 The project profiles prepared by eligible organizations will be submitted by them to the local Agricultural Services Agencies (ASAs) of the MAG, which will verify

- whether their contents are consistent with the eligibility criteria established in the operating regulations. Upon verification, they will be returned to the organizations for them to complete their formulation with all necessary details, clearly presenting the amounts necessary for technical assistance and investments, including their technical, environmental, and financial viability. Once the projects have been completed, the organizations will submit them to the CRMs, which will review the projects, with particular attention to their technical, institutional, environmental, and financial appraisal, in order to ensure that all relevant elements have been included and that the projects are viable. This appraisal will determine, among other things, that the increased financial profitability of the project will be at least 50 percent higher than at present, and that there is a market for the crop proposed in the project.
- 3.26 In the event that an organization submits a project for ASA approval that makes use of credit from sources other than Banco Nacional, the organization concerned would have to produce evidence that its credit has been lined up in order to participate in the program.
- 3.27 Once the projects have been approved by the CRM, the delegate from the regional ASA who is part of that Committee will notify the applicant organization and send the project files to the UCP so that it may effect disbursement for the initial technical assistance expenses, as well as the financing for rewarding environmental externalities. The bank where the corresponding accounts are maintained will disburse the amounts granted to the farmers' organization.
- 3.28 Supervision and monitoring for the execution of activities will be the responsibility of the regional ASA. The ASA's specialists will ensure that the project is proceeding according to the approved plan, including the investments in environmental improvements, which normally should be executed in the initial stages of each project. To this end, the ASA specialists will receive additional training under component 2 of the program.
- 3.29 In the event that a producers' organization submits an innovative project involving a crop or product for which the MAG has no tested experience at the national level, the UCP may approve the conduct of a study on the viability of such production and the potential market for the product concerned. If the findings are positive, such technology could be among those promoted by the program.





- 3.31 The terms of reference for the consultants working on studies in component 3 will be prepared by the AEA on the basis of indicative Terms of Reference. They will subsequently be approved by the UCP, ensuring that they are included in the operating plan, and then prepared for bidding by the AEA.
- 3.32 All disbursements for components 2 and 3 will be made by the AEA after obtaining the approval of the UCP, which shall confirm that services have been satisfactorily rendered.

## **B. Procurement of goods and services**

- 3.33 The procurement of goods and related services, and the selection and hiring of consulting services, will be carried out in accordance with the respective Bank procedures and policy. International competitive bidding will be required for the procurement of goods and services with a cost equal to or greater than US\$250,000 equivalent. International competitive bidding will be required for consulting services with a cost equal to or greater than US\$200,000 equivalent. The procurement of goods and related services and the hiring of consulting services for amounts below those thresholds will be governed by the applicable Costa Rican legislation, provided that it does not conflict with the respective principles and policies of the Bank. For the private technical assistance services included in component 1, the beneficiary organizations that have had a project approved will be free to select from among the suppliers of such services that have been authorized nationally and included in the roster of providers to be established by the MAG. Annex II sets forth the tentative procurement plan for the various program components.

## **C. Execution period and disbursement schedule**

- 3.34 The program execution period will be four years. The period for the final disbursement of the financing resources has been estimated at four years from the effective date of the loan contract. This term is deemed sufficient for carrying out the activities planned under the various components and for the procurement of related goods and services, the hiring of the consulting services called for, and the execution thereof. The timetable of net disbursements excluding financial costs and unallocated outlays, in thousands of U.S. dollars and according to the planned estimates, is provided below:

**Table III-1**  
**Disbursement Timetable**  
**in thousands of U.S. dollars**

<b>Fund</b>	<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>	<b>Year 4</b>	<b>Total</b>
IDB (OC)	2,450	4,310	3,930	1,080	11,770
Local	510	990	1,080	500	3,080
<b>Total</b>	<b>2,960</b>	<b>5,300</b>	<b>5,010</b>	<b>1,580</b>	<b>14,850</b>

#### **D. Appraisal and monitoring**

- 3.35 Program monitoring will be carried out at three levels: by the UCP, SEPSA, and the IDB Country Office (COF/CCR). The UCP will engage in ongoing monitoring of the Program through visits to the regions as well as quarterly progress reports on program execution. For its part, SEPSA will perform supervision as part of its functions under its mandate from the MAG. These reviews will enable SEPSA and the Bank to propose the adjustments necessary to meet agreed targets and modify the operating plan as deemed necessary. The initial level of these indicators will be measured by means of a baseline study financed by the program.
- 3.36 To be able to quantify the socioeconomic and environmental impacts of the program in the medium and long term, the MAG, through SEPSA and as part of the monitoring and evaluation system, will compile information on the sector, market conditions, costs, and the performance of projects financed by the program, as well as the relevant socioeconomic and environmental parameters.
- 3.37 After two years of program execution or when 50 percent of the financing resources have been disbursed, whichever occurs first, SEPSA will prepare terms of reference and contract for a midterm evaluation, using the performance indicators for this purpose. Upon completion of execution, a final program evaluation will be conducted to measure the achievement of the program objectives and targets defined in the logical framework. These evaluations as well as program monitoring will be facilitated by the database. The database in question, as well as the monitoring and evaluation system to be introduced, will contain socioeconomic and environmental management indicators of relevance to program activities and beneficiaries.

#### **E. Auditing and supervision**

- 3.38 Semiannual and annual audits will be conducted by having the executing agency hire an independent auditing firm, in accordance with Bank procedures. The auditing work must be carried out in accordance with terms of reference approved in advance by the Bank (document AF-400) and must include, among other things, the following: (i) examination of the status and use of the Revolving Fund; (ii) examination by sampling of the requests for disbursement and the corresponding support documentation on procurement and the contracting of works, goods, and services; (iii) evaluation of the internal control system of the program; (iv) evaluation of the executing agency's and co-executing entities' compliance with the terms and conditions established in the loan contract and the operating regulations; and (v) inspection visits to a sample of the projects financed using program resources. The cost of these external auditing services will be covered by resources from the Bank financing. The audit firm will be selected and hired in accordance with the Bank's bidding procedures for audit firms (document AF-200). The semiannual reports will be submitted within 60 days following the end of each

six-month period, beginning with the first six months of program execution, while the annual reports will be submitted within 120 days following the close of the fiscal year.

- 3.39 The auditors will also pass judgment on the annual consolidated financial statements of the program, which shall include a breakdown of the expenditures and disbursements made by each co-executing entity. The annual consolidated financial statements shall be submitted within 120 days following the close of each fiscal period.

**F. Ex post evaluation**

- 3.40 The government is interested in collaborating in the ex post evaluation of program impact, but a financing source has yet to be confirmed. The project team considers it important for the Bank to conduct an ex post evaluation of this program, particularly in light of its innovative nature. It is considered that the evaluation should provide evidence of: (i) the efficiency of the mechanism to support sustainable agricultural production, identifying the amount of total investment; (ii) its impact on the productivity and competitiveness of the various activities; (iii) the impact in terms of increasing household incomes, particularly for poor farmers; (iv) the impact in social and environmental terms; and (v) proposed adjustments in the operating mechanisms with a view to improving the efficiency of similar projects in the future. The executing agency will be able to provide a substantial proportion of the information required as a result of the program monitoring activities.

## **IV. VIABILITY AND RISKS**

### **A. Technical viability**

- 4.1 A wide range of technologies have been examined, combining productive innovation with the conservation of natural resources within a perspective of technical, economic, environmental, social, and institutional sustainability. All the systems considered have been proven in use in Costa Rica. Despite the fact that the technologies are relatively innovative, there are specialists in the country with the capacity to provide technical assistance on the introduction of the systems. All of the technology in the models is also appropriate in view of the technical level and basic knowledge of Costa Rica's producers, who, with the technical assistance provided by the program, will be able to adopt the new production systems proposed and other similar ones that the program may finance.

### **B. Environmental and social viability**

- 4.2 The program will have positive environmental impacts in the execution of its components. Financing will be extended for the introduction of agricultural and agroforestry systems that minimize the use of agrochemicals and diversified production systems. In agriculture, natural products will also be introduced for pest control, as will the use of organic manure, with the resulting reduction in the use of agrochemicals. As for livestock farming, it will be developed using sylvopastoral systems, with grazing area rotation, using forage banks and semi-stabled systems. The program will support the use of productive processes in keeping with the intended use of the land, taking into account territorial, municipal, and watershed management plans where they exist. The actions planned are anticipated to achieve an increase in the organic matter and fertility of the soil, less runoff and greater water infiltration, a reduction in environmental contamination, and an increase in productivity and profitability.
- 4.3 The techniques of conservation agriculture and organic farming will be included in the training and technical assistance activities to ensure that they are considered in project design, preparation, execution, and monitoring. Training and technical assistance will also be financed on topics relating to: (i) proper management of agrochemicals; (ii) hygiene and job security; (iii) comprehensive pest management; (iv) measures to protect and conserve soil and water resources; (v) the transfer of sustainable in the productive crop, livestock, forestry, and agroforestry interlinkages, depending on market opportunities; and (vi) training on opportunities for environmental, organic, and forestry certification.
- 4.4 The program will have a positive social impact. The target population for the program is low-income and concentrated in the poorest regions of the country. The program has been designed using participatory processes and has incorporated

social equity criteria in the selection of its geographical scope; moreover, it places emphasis on the participation and consultation of the beneficiary associations. The eligibility criteria for organizations and projects, as well as for technical assistance and training services, have been designed taking into account the specific needs of rural women, in particular when they are heads of household, as well as young producers and minority ethnic groups. In areas with indigenous and Afro-Costa Rican populations, special attention has been accorded these groups in program design and execution. In mobilizing producers to submit the projects, the program will contribute to consolidating the participatory processes, which entail greater social equity and transparency in the allocation of resources.

- 4.5 To ensure the environmental and social feasibility of the operation, an environmental analysis was performed and an Environmental and Social Management Proposal designed, including an Impact Monitoring and Measurement System. The Proposal not only finances activities of direct benefit to the environment, but also includes the following:
  - a. The operating regulations incorporate environmental and social analysis and supervision procedures at each stage of the project cycle so as to ensure that every project approved is socio-environmentally feasible. Accordingly, each project to be financed must: (i) include the necessary measures to mitigate, eliminate, correct, or offset adverse environmental and/or social impact; (ii) comply with Costa Rica's rules and regulations; (iii) avoid activities that cause social exclusion and/or undesirable environmental effects (e.g., changes in the use of forest lands for agricultural activities); and (iv) ensure the participation of producers who are poor, and of women and minority ethnic groups. In addition, each project to be financed will include investments in works, or changes in practices, that will produce environmental benefits, to be reviewed and acknowledged by the program in the form of economic rewards for externalities (see Execution Mechanisms).
  - b. In addition to performing normal monitoring and evaluation activities, the UCP will establish a Program Impact Monitoring and Measurement system and will prepare periodic reports providing indicators on compliance with project processes, results, and impacts, including social and environmental impacts.
- 4.6 The effective application of these procedures, as well as the monitoring and follow-up on the socio-environmental factors of approved projects, will be the purview of a socio-environmental specialist within the UCP, who will be supported by ASA specialists that will be trained to this end. The socio-environmental specialist will also function as the Environmental Director of the program with a view to guaranteeing the application of the technologies proposed in accordance with models to be developed in compliance with the instructions of the Technical Secretariat for the Environment (SETENA) in the Ministry of Environment and Energy. Training is also planned for the private technical assistance services

providers as regards the environmental aspects of the program and the eligible appropriate technologies.

- 4.7 Finally, to ensure the suitability of applying the procedure, evaluate its effectiveness, and verify the environmental and social sustainability of the investments, the executing agency will arrange for independent environmental audits, at a minimum at the midpoint and upon program completion.

**C. Institutional viability**

- 4.8 Institutional viability is assured by the proposed execution mechanism, which includes the following elements:

- a. The use of a Specialized Administrative Agency, which will facilitate all the processing of the bidding, contracting, and disbursements, leaving the UCP freer to focus on the supervision of program execution, promotion, and coordination with the ASAs and producers' organizations.
- b. The readiness of Banco Nacional de Costa Rica to extend credit to producers participating in component 1 of the program. Banco Nacional has broad experience working with farmers. This bank currently processes each month some US\$1.5 million in loans to small and medium-scale agricultural producers through its rural boards. The credit requirements in the proposed operation represent only 5 percent of the total volume managed by the bank. The mechanism designed for this operation will keep processing costs to a minimum, given that the projects will include complete viability studies, thereby reducing the cost of technical and financial analysis by Banco Nacional.
- c. The participation of private suppliers in providing the technical assistance, which will enable the UCP and the ASAs to focus on the technical supervision of projects and the verification of results.
- d. Finally, the regional decentralization of the program, because the CRMs have the capacity to approve projects in the regions.

- 4.9 These elements, in combination with the supervision mechanisms, will permit efficient execution with early warnings of any adjustments that may prove necessary. The volume of operations is relatively low, for which reason no problems of absorption by the regional ASAs is anticipated. The total number of projects to be submitted by the organizations is estimated at a maximum of 220, with about 80 projects a year in years 2 and 3. In the first year, projects will be initiated only starting in the second half of the year, and the fourth year would be devoted almost exclusively to technical assistance with monitoring of the projects begun in the second or third year.

#### **D. Financial viability**

- 4.10 Analysis of the nine models for component 1 reveals that: (i) they are financially viable and generate sufficient profits for net farm income to increase by more than 100 percent from current levels; (ii) the income generated make it possible to pay off loans and make the necessary ongoing investments; and (iii) once their project has been completed, participating producers will have the capacity to pay for all the technical assistance required, to be offered by private providers.
- 4.11 The financial analysis is based on projections of typical farmer incomes in nine selected productive systems, using the surface area involved in each farm (for example, 1.3 ha for the potato model, and 7 ha for the sugar cane model), taking into account all investment and operating costs, as well as the subsidies offered by the program, to arrive at a figure for net annual profit. This profit was compared with the current profit level to determine the net incremental flow resulting from the project. The present value of the increase in producers' net incomes amply exceeds the present value of the investments and operating costs, including all the costs of the program in respect of component 1. The internal financial rate of return (IRR) of the systems analyzed ranges from 28 percent for environmental coffee to 49 percent for garden vegetables (potatoes, greenhouse vegetables).
- 4.12 The sensitivity analysis performed on the models reviewed to date demonstrates the robustness of the activities proposed for component 1. These productive activities have a return of over 12 percent a year, even if the projected value of production declines by 13 percent owing to production shortfalls or price declines, or if production costs rise by as much as 15 percent.
- 4.13 The 50 percent producers' counterpart for technical assistance was determined on the basis of experience with the project financed by the ICDF, and is consistent with the government policy on cofinancing with beneficiaries. During program formulation it was determined that producers customarily pay for their contribution as expected.

#### **E. Socioeconomic viability**

- 4.14 Component 1 will yield two types of benefits. First, there are the private benefits accruing to farmers by adopting sustainable production systems that enhance the competitiveness of their operations. These benefits have been estimated by analyzing the nine productive systems studied and make it possible to calculate the financial and economic return on the practices proposed. Second, there are the benefits external to the producers, benefits which are difficult to estimate and will accrue to the population of the region or the country even though they are not directly involved in the operation. The preservation of natural resources in the program area of influence will benefit all the inhabitants of the region. There will

also be benefits relating to avoiding the costs of the health effect produced by soil and water contamination.

- 4.15 The beneficiaries of the productive projects proposed in component 1 will be small and medium-scale agricultural producers that currently have no access to formal medium-term credit sources and have limited possibilities for making the additional investments required to adopt the sustainable productive systems proposed by the program.
- 4.16 The analyses of the nine productive systems demonstrate the profitability of the new practices and crops proposed. Taking into account the levels of rural unemployment and underemployment in Costa Rica, labor costs were adjusted for the economic analysis by introducing a shadow price of 80 percent for unskilled labor.
- 4.17 The levels of investment subsidy in the farms were calculated on the basis of an approximate estimation of the economic value of some of the environmental benefits generated by the projects to be financed by the program. In the case of the environmental benefits for which economic valuations are available, it was estimated that the value per hectare ranges between US\$686 and US\$1,114, depending on the economic activity on the farm and the distance to a sizable watershed. This range corresponds to a minimum of 20 percent of each farmer's investment costs for all the standard projects to be financed under the program, and up to 30 percent of the value of investments for projects featuring a major investment in environmental protection works.
- 4.18 Economic analysis revealed internal economic rates of return ranging from 30 percent for activities such as environmental coffee to 61 percent for organic fruits and activities such as horticulture (garden vegetables and potatoes) with higher capital turnover per land unit per year and greater associated risks. The economic viability of component 1 as a whole will necessarily depend upon community demand for the productive projects and the type of projects submitted, of which the models analyzed to date are but an indicative sample. In performing this analysis, an estimated projection was made of what it can be assumed could be the relative combination of investments, considering the possible preferences of producers, the private profitability of each productive activity, the restrictions relating to the scale of markets and the agroecological characteristics of the croplands in the program areas of influence. Using a projection of the number of potential beneficiaries per zone and type of project more likely to be implemented, a weighted economic rate of return of 40 percent was obtained for component 1. This rate of return underestimates the genuine economic profitability of the component as it does not account for all the environmental benefits which, in the medium and long term, will accrue from the execution of the investments promoted by the component. Its high level should come as no surprise if one considers that the benefits obtained are the result of productivity increases, reduction in the



production inputs associated with the use of clean technologies, and access to normally lucrative markets such as those for organic and environmental products.

- 4.19 Although the productive systems analyzed offer high financial profitability to producers, the government's intervention to promote the adoption of such systems is deemed necessary. The justification for government intervention may be summarized as follows:
- a. Even when tested technologies are available, the adoption process is difficult for small and medium-scale producers, especially if they are acting individually. By assisting organized producers, the change is made viable and a multiplier effect is generated in the communities. On the other hand, in the case of investments with substantial environmental benefits, the development of a market for selling environmental services will result in additional producer income.
  - b. Shortcomings of the market for technical and entrepreneurial assistance: The low levels of training of the users of services, combined with the absence of information on the quality of those offering services, impede the efficient functioning of the market for technical and business services.
- 4.20 Components 2 and 3 are not amenable to conventional economic feasibility analysis inasmuch as their benefits, while substantial, cannot be directly quantified. This is particularly the case of the benefits derived from the enhancement of the human and social capital of the producers' associations resulting from the activities involving assistance to the organization and local participation. Other benefits of component 3 are those derived from the support for the development of policies based on a participatory process of consultation and dissemination of technical proposals. These benefits are also substantial and difficult to quantify.
- 4.21 **Social Equity and Poverty Reduction Classification.** This operation qualifies as a project promoting social equity, as described in the key objectives for Bank activity contained in the report on the Eighth Replenishment (document AB-1704). The project classifies as investment aimed at poverty reduction under the geographical classification criterion (see 2.6), in that the priority regions to be covered have a higher incidence of poverty than the national average. Moreover, the majority of the beneficiaries in the program area of influence are living in poverty. Using information from the Multipurpose Household Survey of 2001 prepared by the Institute of Statistics and Census of Costa Rica (INEC), as well as data from the Sustainable Development Indicators System (SIDES) of the Ministry of National Planning and Economic Policy (MIDEPLAN), it has been verified that poverty is concentrated in rural areas and, within them, the population of the regions to be addressed with investments and technical assistance has the characteristics of the poorest rural population in the country, as reflected in the indicators of poverty and unmet basic needs.

- 4.22 Of the investment resources for component 1, 75 percent will be devoted to the three poorest regions of the country. On average, 39 percent of the rural households in these regions are living below the poverty line, which is higher than the national average for rural households of 24.3 percent. In these zones, 63.4 percent of the rural households have one or more unsatisfied basic needs (Chorotega, 61 percent; Brunca, 67.1 percent; and Huetar Norte, 61.7 percent), higher than the national average of 54 percent for rural areas. Socioeconomic indicators for the three regions show an open unemployment rate of 10 percent, exceeding the national average of 6 percent; average school completion of 6 years, lower than the national average of 7.6 years, and 28.8 percent of households headed by women, exceeding the national average of 24.8 percent.
- 4.23 The types of production systems and the size of the parcels in which investments can be made using financing under this program are such that the resources will be of great significance for small producers and less important for larger farms. One important restriction will be the US\$1,400 ceiling on the component 1 contribution per producer for financing technical assistance and acknowledging environmental benefits. In addition, the technical assistance accompanying the investment, as well as the training, will be aimed primarily at poor small and medium-scale farmers, as they represent a majority of the members of the beneficiary organizations.
- 4.24 In the design of the project eligibility criteria and the procedures for delivering the technical assistance that will be financed under component 1 of the program, special care was taken to verify that there are no biases against women or minority ethnic groups. In addition, the components on the dissemination and strengthening of information systems and on policy development will create conditions that improve the competitiveness of the rural environment, carrying out concrete actions that improve the opportunities of the residents of the poorest rural areas to improve their employment and income levels without distinctions between specific groups.

#### **F. Gender approach and participation of women**

- 4.25 In each project submitted, it will be ensured that there is equal opportunity for the participation of women farmers, and in the monitoring, follow-up, and evaluation process the concrete results on the inclusion of women will be reviewed. In order to promote the participation of women in all program activities (investment, extension services, training, and access to information), the participation of women promoters in the ASAs in all the regions and in the UCP will be ensured, and incentives will be provided for the participation of female extension agents among the technical assistance providers. To support women's groups (cooperatives, etc.) seeking to submit projects, they will receive more intensive technical assistance during project preparation and execution, without being required to make any additional counterpart payment for the additional service provided.

## **G. Risks**

- 4.26 The major risk to achieving the anticipated increases in farmer incomes relate to the markets for their products. Prices on external markets may drop unpredictably. The same may occur for national market prices owing to excessive increase in the marketed volumes of specific agricultural producers, given the relative small scale of consumer markets in Costa Rica. A significant drop in prices could eat into the anticipated profitability of crops expanded using program support. In order to minimize this risk, the projects financed by the program will include an analysis of national and foreign markets, together with technical assistance and forecasts for product processing and marketing. In addition, flexibility in the content of the projects to be financed will make it possible to identify productive crops and activities that adapt to changing market conditions. Finally, the updated information on prices and market conditions that will be made available to producers and technical assistance service providers by InfoAgro will further contribute to reducing this risk.
- 4.27 Another possible risk would be that the producers would not show sufficient interest in environmentally sustainable technologies, which has been mitigated by means of the criteria for selecting the projects to be financed, the economic acknowledgment of environmental benefits, and the technical assistance focused on conservation agriculture.
- 4.28 Finally, despite the interest shown by producers in adopting the new productive practices promoted by component 1 of the program, there is the risk that some of them will lack the financial resources required, given the scant incomes of small producers. To mitigate this risk, the program contemplates the participation of Banco Nacional de la República de Costa Rica, which has undertaken to make a line of credit available to program beneficiaries for granting medium-term loans.

**PROGRAM TO DEVELOP SUSTAINABLE AGRICULTURAL PRODUCTION (CR-0142)**  
**LOGICAL FRAMEWORK**

OBJECTIVES	INDICATORS	MEANS OF VERIFICATION	ASSUMPTIONS
<b>GOAL</b>			<b>SUSTAINABILITY</b>
Contribute to the economic and social development of rural areas in Costa Rica	<p>Incidence of rural poverty in the program area reduced upon completion of execution.</p> <p>Rural unemployment and underemployment levels in the program area decreased upon completion of execution.</p>	<p>National household survey.</p> <p>National statistics on rural incomes and unemployment.</p>	
<b>OBJECTIVE</b>			<b>OBJECTIVE FOR GOAL</b>
Increase incomes and improve the quality of life of the households of small and medium-scale agricultural producer participants on an economic and environmentally sustainable basis.	<p>Farm incomes of participating producers increased in a sustainable manner by at least \$2,000 per household per year upon completion of each project.</p> <p>Contribution of participating producers to water contamination decreased by 50 percent upon completion of the program. Contribution of participating producers to soil erosion decreased by at least 80 percent on participating farms upon completion of the program (indicators to be defined during baseline study).</p>	<p>Baseline surveys and program impact evaluation.</p> <p>Baseline studies and final environmental appraisal.</p> <p>Evaluation of changes in agricultural practices as a result of the program.</p>	<p>No macroeconomic events occur which have a substantial negative effect on the national economy.</p> <p>Continued prudent management of macroeconomic policy.</p> <p>Continuation of productive conversion programs and policies to increase sectoral competitiveness.</p>

OBJECTIVES	INDICATORS	MEANS OF VERIFICATION	ASSUMPTIONS
COMPONENTS			COMPONENTS FOR OBJECTIVE
<p><b>Component I: Investments and Technical Assistance</b></p> <p>Sustainable agricultural and agroforestry productive systems introduced</p>	<p>Sustainable agricultural and agroforestry productive systems introduced in at least 11,000 hectares for at least 4,000 households of direct beneficiary producers upon completion of program execution.</p>	<p>Annual reports on the number of participating producers and number of hectares under new technologies promoted by the program.</p> <p>Periodic reports of the Program Coordination Unit (UCP).</p>	<p>No disruptions in world markets for agricultural produces that significantly lower export prices.</p> <p>The additional volumes produced by participating farmers and channeled into national markets do not trigger a significant decline in their prices.</p>
<p><b>Component II: Training and Information</b></p> <p><b>(a) Training subcomponent</b></p> <ul style="list-style-type: none"> <li>Farmer members of producers' organizations trained to participate in the program.</li> <li>MAG extension agents assigned to the ASAs trained in natural resources, conservation agriculture, and organic production.</li> <li>Extension philosophy and methodology of the program presented to the staff of technical assistance services and training providers.</li> <li>Information on program disseminated to stimulate the interest of producers considered to be potential participants in the program.</li> </ul>	<ul style="list-style-type: none"> <li>320 courses completed by third year of execution in order to train 6,000 producers on technical topics complementing the technologies promoted by the program. 1,200 producers in first year of execution, 2,400 in second, and 2,400 in third.</li> <li>On completion of program execution, 680 hours of courses, seminars, and other events completed to provide training to ASA extension agents on topics relevant to their work.</li> <li>On completion of the second year of program execution, 330 hours of introductory courses completed with a total of 400 participants.</li> </ul>	<p>Semiannual progress reports by the UCP</p>	<p>Government continues to attach priority to agricultural development and environmental protection.</p>

OBJECTIVES	INDICATORS	MEANS OF VERIFICATION	ASSUMPTIONS
	<ul style="list-style-type: none"> <li>On completion of program execution, to finish with program support: 19 producers' meetings; 40 rounds for information exchange; 176 roundtables for appraisal of experimental results; and 88 Comprehensive Instructional Farms held, providing 176 demonstration days and field days to the producers concerned.</li> </ul>	Semiannual progress reports by the UCP	
<p><b>(b) Information subcomponent</b></p> <p>Agricultural Information System (InfoAgro) improved to meet producers' needs.</p>	<ul style="list-style-type: none"> <li>A financially sustainable information capture and transfer system, with reliable and timely data, functioning as a web page, by the completion of the second year of program execution.</li> <li>Information systems installed in the 89 ASAs by the completion of the second year of program execution, interconnected with the InfoAgro/SEPSA network.</li> <li>Five-year information on prices and markets for relevant products disseminated via the ASAs to participating producers by completion of the second year of program execution.</li> <li>Impact Monitoring and Measurement System installed and operational 6 months after start of program.</li> </ul>	<p>Semiannual progress reports by the Program Coordination Unit (UCP)</p> <p>Mid-term evaluation reports</p> <p>MAG reports</p>	Government continues to attach priority to agricultural development and environmental protection.

OBJECTIVES	INDICATORS	MEANS OF VERIFICATION	ASSUMPTIONS
<p><b>Component III: Studies to support the competitiveness of the agricultural sector</b></p> <p>Studies complementing the program activities contributing to the objectives achieved</p>	<ul style="list-style-type: none"> <li>• Information and baseline study on the agricultural sector completed by end of first six months of program execution.</li> <li>• Competitiveness studies completed by end of first year of program execution.</li> <li>• Studies of the Monitoring and Evaluation System for Environmental and Social Impacts and Socioeconomic Impacts for the sector completed after nine months or program execution.</li> <li>• Study on payment mechanisms for environmental services completed after third year of program execution.</li> <li>• Participatory study on the potential for developing the rural economy in indigenous communities completed by the end of the third year of program execution.</li> <li>• Sectoral study on the rural economy completed by the end of the second year of program execution.</li> <li>• At list six targeted studies on agricultural production, marketing, and agroindustry to identify factors constraining the development of the agricultural sector completed in the course of program execution.</li> </ul>	<p>Consultants' studies delivered to the UCP, to the satisfaction of the Government of Costa Rica and the Bank.</p>	<p>Government continues to attach priority to agricultural development and environmental protection.</p> <p>Government continues the process of rationalizing the various aspects of agriculture sector policy and trade, which constitutes an obstacle to sectoral competitiveness.</p>

## PROCUREMENT OF GOODS AND SERVICES

CATEGORY	Total amount in US\$	Type of contracting (*)	Year/quarter of contracting
<b>1. CONSULTING AND SERVICES</b>			
Hiring of UCP Coordinator	200,000	International	1/I
Contracting of Specialized Administrative Agency	300,000	International	1/I
Monitoring and Supervision	200,000	International	2/IV, 4/IV
Semiannual Financial Audits	150,000	National	1/III, 2/I, 2/III, 3/I, 3/III, 4/I, 4/III
Environmental Audits	35,000	International	2/IV, 4/IV
Hiring of Consultant on Design, Installation, and Maintenance of Information System	50,000	National	1/III
Contracting Publication of Training Manuals aimed at Young Producers	100,000	National	1/II
Local Training for MAG Specialists	300,000	National	1/II
Local Training for Associations and Producers	1,000,000	National	1/II
Contract for Consulting Services on Baseline Information on Agricultural Sector	400,000	International	1/II
Contract for Consulting Services on Competitiveness	100,000	International	1/IV
Contract for Consulting Services on Monitoring and Evaluation Systems for Social, Environmental and Socioeconomic Impact	250,000	International	1/II
Contract for Consulting Services on Environmental Services Markets	250,000	International	1/III
Contract for Consulting Services on Development Potential of Rural Indigenous Economy	200,000	International	2/I
Contract for Consulting Services on Sectoral Study of Rural Economy	200,000	International	2/I
Contract for Consulting Services on Agricultural Production, Marketing, and Agribusiness	200,000	International	2/I
<b>Subtotal</b>	<b>3,925,000</b>		
<b>2. GOODS</b>			
Purchase of Hardware for InfoAgro Information System	650,000	International	1/III
Purchase of 6 vehicles	75,000	National	1/II
<b>SUBTOTAL</b>	<b>725,000</b>		
<b>Total</b>	<b>4,630,000</b>		
<p>* NOTES:</p> <p>(a) The awarding of contracts for works, the procurement of goods and related services, and the hiring of consulting services financed with program resources will be governed by the procedures agreed upon with the Bank in the terms of the loan contract.</p> <p>(b) International competitive bidding will be required for the procurement of goods and related services costing over US\$250,000 and for construction projects exceeding US\$2,500,000. International competitive bidding will be required for consulting services exceeding US\$200,000. Procurement in amounts below those thresholds will be referred to as "smaller amounts" and governed by the following rules:</p> <p>(1) <i>Unrestricted National Competitive Bidding</i>: (i) works equal to or greater than US\$500,000 and less than US\$2,500,000; (ii) goods and related services equal to or greater than US\$50,000 and less than US\$250,000; and (iii) consulting services equal to or greater than US\$100,000 and less than US\$200,000.</p> <p>(2) <i>Private National Competitive Bidding</i>: (i) works equal to or greater than US\$20,000 and less than US\$500,000; (ii) goods and related services equal to or greater than US\$10,000 and less than US\$50,000; and (iii) consulting services equal to or greater than US\$10,000 and less than US\$100,000.</p> <p>(3) <i>Direct contracting</i>: (i) works under US\$20,000; (ii) goods and related services: under US\$10,000.</p>			